

1       1. In a utility vehicle having a frame supported by a front steering axle with a  
2 pair of front steered wheels mounted upon the front steering axle, a rear drive axle  
3 with a pair of powered rear wheels mounted upon the rear drive axle, a middle  
4 driven axle with a pair of driven middle wheels mounted on the middle driven axle,  
5 and a longitudinally oriented bogey beam with the front steering axle attached at the  
6 front end of the bogey beam and the middle driven axle attached at the rear end of  
7 the bogey beam, and the bogey beam attached to the vehicle at and pivoting about  
8 a pivot point between the front steering axle and the middle driven axle, the  
9 improvement comprising:

10       a drive shaft interconnected with the front steered wheels and interconnected  
11 with the middle driven axle and driving the front steered wheels from the middle  
12 driven axle.

13       2. The vehicle of claim 1 wherein the drive shaft is enclosed within a hollow  
14 bogey beam.

15       3. The vehicle of claim 1 further including a drive assembly interconnecting  
16 the rear drive axle to the middle driven axle to transfer power from the rear drive  
17 axle to the middle driven axle.

18       4. The vehicle of claim 1 further including a universal drive assembly  
19 interconnecting the rear drive axle to the middle driven axle to transfer power from  
20 the rear drive axle to the middle driven axle, wherein the universal drive assembly  
21 comprises a universal joint connected to each of the middle driven axle and the rear  
22 drive axle and an assembly with telescoping shafts interconnecting the two  
23 universal joints.

1       5. A utility vehicle comprising:

2           a frame;

3           a front steering axle with a pair of front steered and driven wheels mounted

4 upon the front steering axle;

5           a rear drive axle with a pair of driven rear wheels mounted upon the rear

6 drive axle;

7           a middle driven axle with a pair of driven middle wheels mounted on the

8 middle driven axle;

9           a longitudinally oriented bogey beam with the front steering axle attached at

10 the front end of the bogey beam and the middle driven axle attached at the rear end

11 of the bogey beam, and the bogey beam attached to the vehicle at and pivoting

12 about a pivot point between the front steering axle and the middle driven axle; and

13           a drive shaft interconnected with the front steered wheels and interconnected

14 with the middle driven axle and driving the front steered wheels from the middle

15 driven axle.

16       6. The vehicle of claim 5 wherein the drive shaft is enclosed within a hollow

17 bogey beam.

18       7. The vehicle of claim 5 further including a drive assembly interconnecting

19 the rear drive axle to the middle driven axle to transfer power from the rear drive

20 axle to the middle driven axle.

21       8. The vehicle of claim 5 further including a universal drive assembly

22 interconnecting the rear drive axle to the middle driven axle to transfer power from

23 the rear drive axle to the middle driven axle, wherein the universal drive assembly

1 comprises a universal joint connected to each of the middle driven axle and the rear  
2 drive axle and an assembly with telescoping shafts interconnecting the two  
3 universal joints.

4       9. In a utility vehicle having a frame supported by a front steering axle with a  
5 pair of front steered wheels mounted upon the front steering axle, a rear drive axle  
6 with a pair of driven rear wheels mounted upon the rear drive axle, and a  
7 longitudinally oriented bogey beam with the front steering axle attached at the front  
8 end of the bogey beam and a resilient member attached at the rear end of the  
9 bogey beam and to the vehicle, and the bogey beam attached to the vehicle at and  
10 pivoting about a pivot point between the front steering axle and the resilient  
11 member, the improvement comprising:

12       a drive shaft interconnected with the front steered wheels and interconnected  
13 with the rear drive axle.

14       10. The vehicle of claim 9 wherein the drive shaft is enclosed within a hollow  
15 bogey beam.

16       11. The vehicle of claim 9 wherein the resilient member is a suspension  
17 strut.

18       12. The vehicle of claim 9 further including a drive assembly interconnecting  
19 the rear drive axle to the drive shaft to transfer power from the rear drive axle to the  
20 front steering axle.

21       13. The vehicle of claim 9 further including a universal drive assembly  
22 interconnecting the rear drive axle to the drive shaft to transfer power from the rear  
23 drive axle to the front steering axle, wherein the universal drive assembly comprises

1 a universal joint connected to each of the drive shaft and the rear drive axle and an  
2 assembly with telescoping shafts interconnecting the two universal joints.

3 14. A utility vehicle comprising:

4 a frame;

5 a front steering axle with a pair of front steered and driven wheels mounted  
6 upon the front steering axle;

7 a rear drive axle with a pair of driven rear wheels mounted upon the rear  
8 drive axle;

9 a longitudinally oriented bogey beam with the front steering axle attached at  
10 the front end of the bogey beam and a resilient member attached to the vehicle and  
11 to the bogey beam at the rear end of the bogey beam, and the bogey beam  
12 attached to the vehicle at and pivoting about a pivot point between the front steering  
13 axle and the resilient member; and

14 a drive shaft interconnected with the front steered wheels and interconnected  
15 with the rear drive axle and driving the front steered wheels from the rear drive axle.

16 15. The vehicle of claim 14 wherein the drive shaft is enclosed within a  
17 hollow bogey beam.

18 16. The vehicle of claim 14 wherein the resilient member is a suspension  
19 strut.

20 17. The vehicle of claim 14 further including a drive assembly  
21 interconnecting the rear drive axle to the drive shaft to transfer power from the rear  
22 drive axle to the front steering axle.

1       18. The vehicle of claim 14 further including a universal drive assembly  
2 interconnecting the rear drive axle to the drive shaft to transfer power from the rear  
3 drive axle to the front steering axle, wherein the universal drive assembly comprises  
4 a universal joint connected to each of the drive shaft and the rear drive axle and an  
5 assembly with telescoping shafts interconnecting the two universal joints.

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